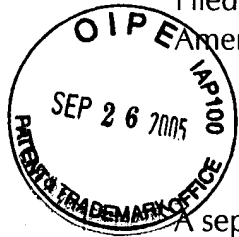


STF

Ser. No. 10/731,201

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Amendment B



## REMARKS

The present amendment is responsive to the Office Action mailed August 23, 2005.

A separate claim listing/amendment accompanies these Remarks.

The Examiner's suggestion as to the wording of claim 32 is appreciated and has been adopted in principle. Accordingly this claim should be found free of formal defects and allowable upon reconsideration and allowance of parent claim 61 in light of remarks that are presented below.

Claim 33 has been amended to more accurately define the relationship of the veneer as it is bonded to the foam core.

Claim 34 has been amended to correct a typographical error.

Claim 35 has been amended to be dependent on claim 34 and also to more accurately define the invention.

Claim 36 has been amended to provide a proper antecedent basis for the claim language.

Claim 47 has been amended to cure a typographical error.

Claim 48 has been amended to more clearly define the inventive features.

Claim 58 has been amended to more clearly define over the prior art.

Claim 62 has been amended to correct a typographical error.

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It is first noted that the prior art has been exhaustively searched in the examination of the present application and its parent application, by two Examiners. The first Examiner cited some sixty prior art patents and the present Examiner has cited an additional 26 prior art patents, for a total 60 prior art teachings that have been made of record. Yet, despite this

intensive search effort, there is no cited reference that deals with the specific problem that has been overcome by Applicants. Applicants' invention relates to the use of foamed polystyrene to provide light weight panels that can serve primarily to form large objects that are not intended to serve any significant load bearing or structural function, all as is more fully discussed in the application.

The intended field of use has only one requisite, namely it must be capable of providing a visually attractive surface, to this end at least one side of the panel is formed by a veneer. A veneer as herein used, consistent with the disclosure description and dictionary definition, is a thin, non-structural sheet material, such as paper, or wood having a normal veneer thickness in the order of .025 inches.

There are in fact fastening means for panels that serve these non-structural foam panels and provide a requisite tightness of connection to minimized joint visibility. Such prior art fastening means are disclosed in applicants' description of the background to their invention.

The Examiner relies exclusively on teachings involving the joining of panels in forming integrated portions of a building. Non-structural foam panels would be wholly inappropriate for use as wall panel for a building wall. Similarly, the structural wall panels of the references are both too heavy and too expensive to serve the purposes of providing such functions as that of a suspended valance.

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The broader aspects of Applicants' invention are found in their elimination of a post or side frame element to define the edge face of each panel, which elements are in abutting relation when the panels are in joined relationship. Applicants attained this simplification

through the discovery that the foamed material of the slab could be relied upon as the primary retaining means through engagement with the projecting and underlying portions of a joining member.

The factor of eliminating such side posts is of great economic impact. Not only is the cost of fabricating foam core panels substantially reduced by eliminating the cost of the post itself, there is an additional expense in incorporating into the foam core panels that is also eliminated. Additionally, there is a flexibility that is obtained where it is necessary to provide a custom size panel. This is to point out that an infinite range of size is obtainable is a standard size panel is to be modified. In a panel incorporating a side post, in the usual case, the minimum possible reduction would be the width of the side post, which would then have to be replaced in one fashion or another. Further, by eliminating the side posts, custom sizing on the job site because a simple procedure simply using a portable saw and router, as is subject matter covered in certain of the allowable claims.

There are only three references in the prior art that have been relied on where foam core panels are grooved and then held in joined relation by a joining member engaged in the groove. Consider:

**Meckstroth (MK)** discloses a wall panel 10 comprising vertical, side frame members 12, at opposite ends of a slab of foamed polystyrene. He also suggests that top and bottom frame members may be incorporated in his wall panels. The outer, lateral surface of the wall panel is defined by a sheet of rough sawn plywood and the inner, lateral surface is defined by a piece of sheet rock. An undercut, dovetail slot extends vertically of each of the end posts 12. A hollow joining member 20 is disposed in the vertical slots to hold the wall panels in assembled relation. The joining member has hinged wall sections, permitting it to be

collapsed to a reduced cross section and introduced laterally into the grooves. The panels can then be horizontally aligned and then shifted into abutting relation. The joining member can then be expanded into the undercut grooves to hold the panels in assembled relation.

In an alternate embodiment, MK also teaches that the wooden side frame members can, optionally be formed a metal or plastic extrusion. But does not, in any way suggest that this component of the panel can be eliminated.

**McKee** teaches a wall panel which is defined by vertically disposed, side frame, end caps 18, wall members 20 are secured to these end caps to define a central cavity in which a core of urethane is foamed in place (some how sealed at top and bottom to contain the foam). Adjacent panels are held in assembled relation by inserting a joining member 12 lengthwise into the slots. The end caps 18 are actually in spaced relation, as resilient inserts 16 are inserted on opposite sides of the central web of the joining member 12.

Note will also be taken of **Raymond** (5,007,222) relied upon by the Examiner in rejecting the broader claims in the parent application. Raymond also utilizes a joining member 142 to hold panels in assembled relation. As with MK and McKee, the joining member co-acts with rigid end posts, rather than the foam slab.

Claims 33-34, 36, 38, 49, 54, 58 and 61 are rejected under 35 USC §102. It is well established that in order for this ground of rejection to be valid, the prior art must respond to all of the limitations of a claim. This requirement is not met by Meckstroth (3641730)(MK) on which the Examiner relies.

Independent claim 33 sets forth the broader aspects of the invention as a novel joining of panels comprising a foamed plastic slab. This claim, by specifying that joined panels have, "respectively, abutting surfaces of foamed material in engaged relation with

each other” define panels in which the end post have been eliminated. In MK it is the surfaces of the end posts 12 or 60 that are engaged. The foamed plastic material of one panel does not engage the foamed material of the other panel, nor is the primary mechanism for engaging the joining member in preventing separation of the panels.

MK is further distinguished by claim 33 in that it does not respond to the panel definition of comprising a “veneer”. MK’s panels are specifically taught to be used as a component that is to be incorporated, as portion of the outer wall of a building. The plywood on one side provides structural strength for the panel, as does the sheet rock on the other side, both add weight and expense that render the panel unsuitable for use as a valance or other use for which applicants’ panels are designed.

Claim 34, dependent on claim 33, is more specific as to the abutting surfaces and is likewise distinguished from MK.

Claim 36 is dependent on claim 35. Inasmuch as claim 35 is not rejected on MK under ‘102, the basis for rejection of this claim is not understood. Clarification is requested.

Claim 38 further distinguishes MK in specifying that the slots have portions that are at right angles to the abutting surfaces, whereas, MK’s slots are continuously angled.

Claim 49 is dependent on claim 48. Inasmuch as claim 48 is not rejected on MK under ‘102, the basis for rejection of this claim is not understood. Clarification is requested.

Independent claim 58, directed to the method aspects of the invention, similarly distinguishes MK by defining panels in the same terms as claim 33 and then further in specifying that the panels are brought into abutting relation and a joining member introduced into the retaining slots. In order to more positively distinguish MK, this claim has been amended to sequence the introduction of the joining member subsequent to bringing

the panels into abutting relation, and further to specify that the joining member is introduced longitudinally.

Claim 61, dependent on claim 58, specifies the procedure employed in custom fitting a panel to provide a desired panel dimension. It is readily conceded that marking is an accepted procedure for ensuring that a cut is made in the proper place. However, MK has no teaching whatsoever of modifying the dimension of a panel. It is not understood how MK responds to and serves as an anticipation of this claim.

#### Rejections Under 35 USC §103(a)

Claims 50 and 62 are rejected on MK, modified in light of the teachings of both McKnight and McKee.

Claim 50, dependent on claim 33, adds to the independent claim the further feature of providing a wear resistant surface for the retaining surface of the slot. The parent claim has not been separately addressed in the Examiner's rejection. It is of course conceded that the corresponding retaining surface in McKee is provided with a wear resistant surface, but that feature comes through the provision of end post 14. Since MK fails in providing the basic teaching of abutting, foamed core surfaces (because of the elimination of end posts), neither McKee nor McKnight are of any significance in teaching an anticipatory modification.

With respect to claim 62, directed to the method of providing this wear resistant surface, McKee is also inapposite since his foamed cores are expanded *in situ* and there is never a slot into which anything is insertable. McKnight is also inapposite in that the referenced portion makes no mention of the utilization of plastic memory.

Claims 35 and 36 stand rejected on MK in view of Day. These claims go to a side by

side arrangement of panels, as seen in Fig. 4, 5 or 6, and, accordingly have now been directly or indirectly made dependent on claim 34.

As previously discussed, MK is defective in failing to teach the elimination of end posts in joining panels. Day simply teaches that foam core panels may further include top and bottom rails, and provides no teaching whatsoever as to the use of a slot/joining member mechanism for holding panels in assembled relation. Claim 35, going to a more specific type of foam core panel is therefore not anticipated since the novelty lies in the joining mechanism, not in the panel per se.

With respect to claim 36, Applicants are unable to ascertain the basis for the Examiner's rejection. As a basic precept, first while both teach the provision of sheet material, neither teaches the use of non-structural veneers in association with foam core panels. Reference is made to Fig. 4 in Day, but there is no slot illustrated in either of the horizontal rails 74, 76, let alone any veneer covering a horizontal surface of the rails to conceal slots. Fig. 1 of MK is likewise defective.

Claims 37, 52 stand rejected on MK in view of Bloom.

The fact that claim 37 is dependent on claim 36 is ignored. Next, Bloom teaches only the provision of a mounting grid for ceiling tiles — in no way does Bloom supply the missing teaching of the provision of a mounting means in the top rail of MK, who does not have a top rail. More importantly there is no teaching in Bloom that the structural components of a building should or could be suspended from a ceiling.

The Examiner is reminded that the use of assemblies of joined foam core panels as ceiling suspended valences is part of the acknowledged prior art. Claim 37 goes to an improved assembly in which the lower, exposed portions of the assembly are covered by

veneers to provide a desired, pleasing, visual appearance. Neither MK or Bloom suggest such an end result.

Upon review of the Examiner's rejection of claim 52, it was discovered that a typographic error had occurred in the use of the term horizontal instead of vertical. The provision of a leveler plate assures accurate **vertical** positioning of one panel relative to another. The teachings of Bloom relative to his clips 32 go to the horizontal positioning of ceiling tiles and have no pertinence to the claim 52 as now presented.

Claim 53, dependent on claim 53, is rejected on the same references on further on the teachings of Day relative to a top rail. Inasmuch as there is no suggestion that the constructional panel of MK should be suspended there is no reason to add a top rail to MK's panels, except the hindsight of Applicants' disclosure.

The rejection of claims 55-57 is not understood. These claims include a three element joining means. The Examiner asserts that the combined teachings of four references serves as an anticipation. But even in the impermissible light of Applicants' own teachings, it is impossible to reconstruct the prior art in a fashion that would be read on by these claims. Even the assertion that the upper end of McKee's key 16 is grippable does not suggestion the provision of recess to provide gripping access to the upper joining member.

Claims 39-41, 43-49 stand rejected on the MK in view of Grieb and McKee.

It will first be noted that angled relationships between foamed core, display panels is acknowledged as part of prior art practices.

Claims 39 and 40 define a preferred slot/joining member configuration in which the central web serves a positioning function, which prevents the panels from shifting laterally of the joining member. This lateral positioning function is not to be found in McKee. While it



could be argued that the strips in Grieb perform this lateral positioning function, those strips do not serve the function of a joining member for preventing separation.

Claim 41 goes to the slot configuration seen in Fig. 6, where the tapered bottoms of the slots minimize the material removed from the panels and thereby preserve panel strength. Such a concept is not found in the references.

Claim 42 goes to a preferred form of mitered joint fastening means as shown in Fig. 7. This claim stands rejected same references as claims 39, 40, plus a fourth reference, Couse, all of which are found in the field of art relating to building constructions. It is respectfully submitted that this is an improper rejection in that it is a piecemeal reconstruction of the prior art solely in the hindsight of Applicants' teachings.

Claim 43 goes to the provision of a camming surface on the joining member which draws the panels together when inserted into the foam core slots. Despite the Examiner's assertion, Applicants are unable to identify any such slot in McKee. It is noted in McKee that the panels are first placed in loosely assembly relation by introducing the key 12 into the end post slots. The assembly is then completed by positioning the inserts 16 on opposite sides of the key. It is not seen how McKee's key could perform the function of drawing the panels into assembled relation.

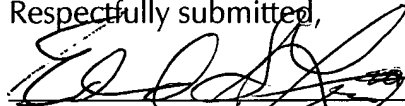
Dependent claims 44-46 go to a preferred cross section of the joining member in combination with the novel structure of the parent claims. The Examiner is reminded that a basic premise of the present invention is found in the fact that the foamed plastic material, which is inherently weak is an integral component of the joining function, as opposed to the reliance on a structural post member, as in McKee and MK. The secondary references do not provide any guidance for selection of joining member configurations that would best be

effective where the foam material is active in the joining function. The Examiner's conclusion of obviousness fails to be supported.

Claims 48 and 49 go to the problems of providing an assembly of extremely thick foamed objects and the claimed use of multiple, parallel slot and joining members as discussed in connection with the embodiment of Figs. 11 and 12. The Examiner has failed to even acknowledge these limitations. Absent a stated basis for rejection, these claims are deemed allowable.

Reconsideration and allowance of the application as now presented are respectfully requested.

Respectfully submitted,



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#### **CERTIFICATE OF MAILING**

I hereby certify that the foregoing and accompanying, separate Claim Amendments were deposited with the United States Postal Service, prepaid first class mail, addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450 on September 21, 2005.



Edmund S. Lee III